



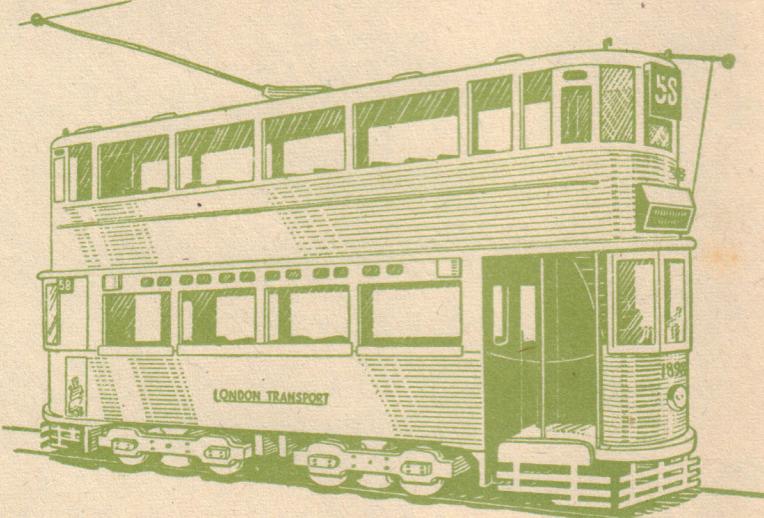
# FRETWORK DESIGN No. 246 SPECIAL

**SUPPLEMENT TO HOBBIES No. 2890**  
**MARCH 21, 1951**

# MODEL OF A TRAMCAR

**SIZE:—12½ins. LONG. 6ins. HIGH.**

THE ARROWS  
INDICATE THE  
DIRECTION OF  
GRAIN OF WOOD

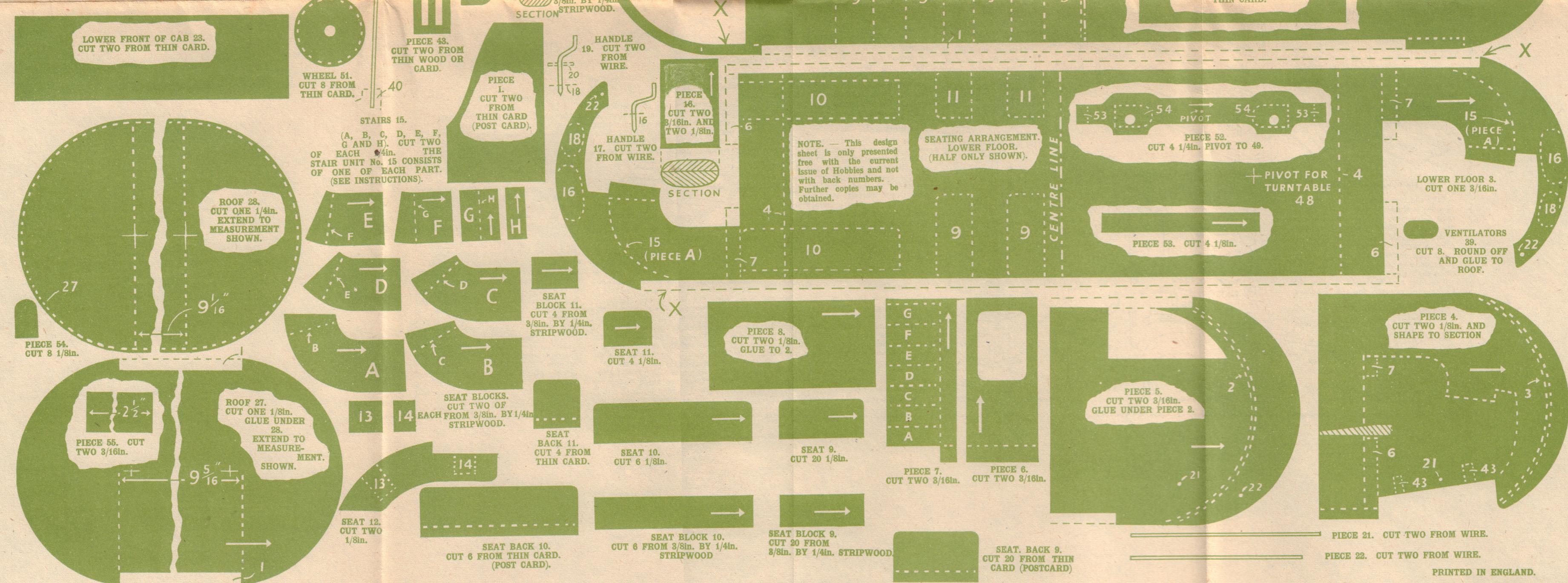


**SCALE—APPROX. 3/8in.—1 FT.**

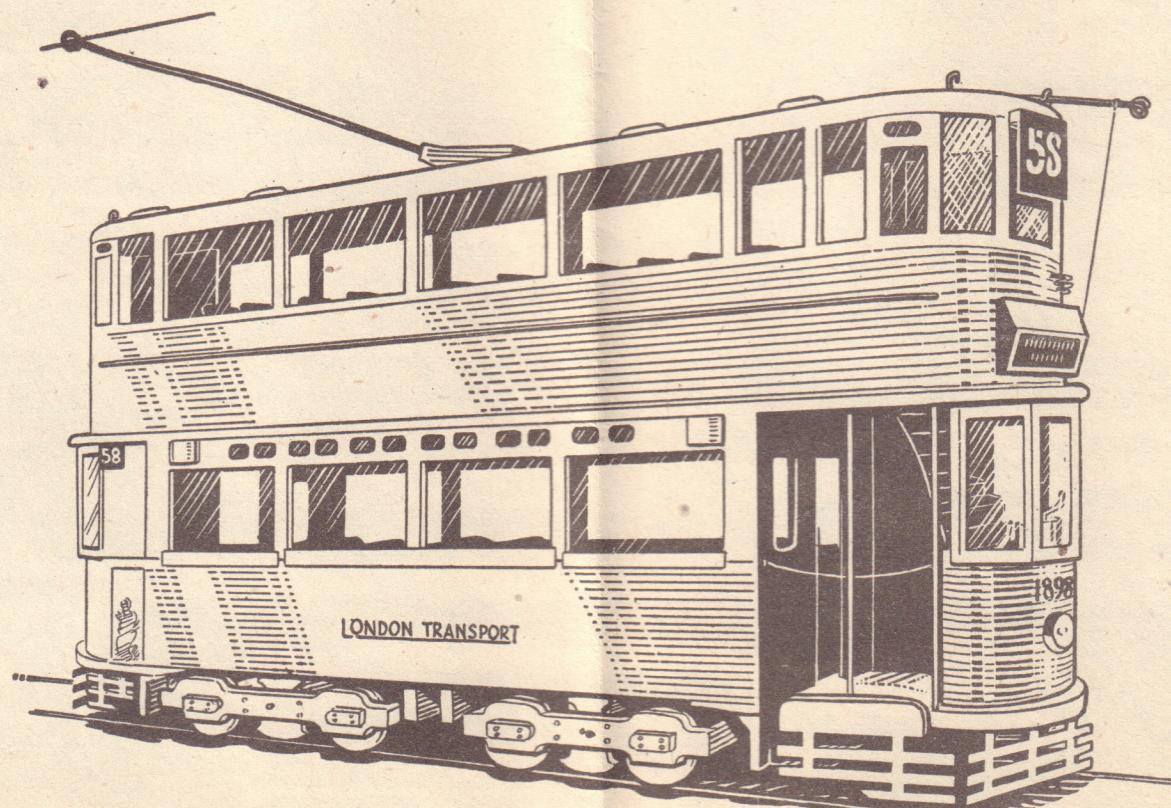
PANELS OF WOOD  
REQUIRED FOR THIS DESIGN

THREE H2	ONE Q2	ONE G3
ONE H3	ONE Q1	ONE PPM

Materials for making this design are supplied by HOBBIES LIMITED, Dereham, Norfolk.



# Any craftsman would be proud to make this MODEL LONDON TRANSPORT TRAMCAR



MANY readers, no doubt, will be glad of this opportunity to make an attractive model Tram to remind them of a mode of transport now disappearing off the streets. We have prepared this design while details are still available. We are indebted to the Tramway and Light Railway Society, Harringay, London, for their help in supplying the necessary details for making this splendid little model.

All parts must be traced on the various thicknesses of wood, and cut out carefully. Clean them up as you go along, number them in pencil and put away in a convenient cardboard box to await assembly.

**PAINT THIS SIDE**

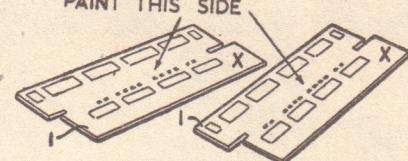


Fig. 1—Painting the sides

Take the two sides No. 1 and lay side by side, as shown in Fig. 1. The uppermost sides must now be painted cream or white. Notice particularly that when these sides are assembled, the painted parts will face each other, and the projections marked X in Fig. 1 will be at opposite ends of the model, and will cover the stairs.

The next step is to pin in place the transparent material for the windows.

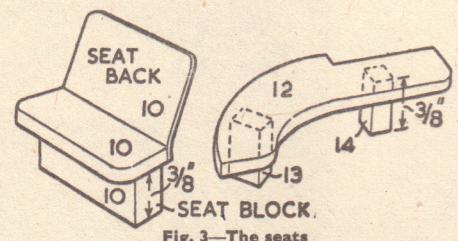


Fig. 3—The seats

The positions of the fret pins are shown marked N on the design. Use the smallest size pins available. The top windows will be two pieces 9 1/2 ins. long

by 1 1/2 ins. wide, and the bottom windows, two pieces 7 1/2 ins. by 1 1/2 ins. Make sure when fitting the material over the bottom windows, that it comes behind the 12 small windows and that it does not come in the way of pieces 6 and 7, which will have to be glued in later. The protruding ends of the pins must be filed off.

Now fit the sides to the top floor (No. 2) so that the painted sides are facing each other. This will bring the extending pieces marked X in Fig. 1 at opposite ends of the floor. Now glue in place the lower floor (3) pieces 4 and 5, and the handle (17) and wheel (20) added afterwards. Paint and glue in position on the lower floor No. 3. Insert the wire uprights Nos. 21 and 22. The positions of the holes are shown clearly on pieces 3, 4, and 5.

#### Completing the Cars

The pieces of card No. 23 are bent round each end of piece 3, and glued. They will overlap slightly on piece 1, and must be glued here also (see B and C Fig. 5). Pieces 24 and 25 are now glued together, as shown in Fig. 4D, and transparent material is cut to fit, and slipped in place. It is held there with small blobs of transparent glue, such as Balsa cement. Now glue this completed window framing to the underside of piece 5, and to the front of piece 23, as shown in Fig. 5D. The sketches A, B, C and D in Fig. 5 show clearly the various steps in completing the cab.

#### The Top Deck

Bend piece 26 round the front of piece 2, and glue in place. This operation is rather tricky, and you will need to place one end in position first. Place on it a suitable weight, allow the glue to dry, and then complete the gluing and weight the other side. Cut a piece of transparent material 1 1/2 ins. by 4 ins. and bend into place behind the window opening. A drop of glue will keep it perfectly in position.

The roof is made up of pieces 27 and 28,

pieces 6, 7 and 8. Make sure that no excess glue goes on the one side, which must be taken away to complete the interior. Only glue one side in position.

Fig. 2 shows the construction so far, with the interior ready to take the seats, etc., and with the various parts numbered. Now that the side has been removed, complete the painting of the interior.

#### The Seats

These are made up as shown in Fig. 3. Each seat comprises one of each part; seat, seat block, and back. Fig. 3 shows that those parts which belong together have the same numbers. Seats of three different lengths, 9, 10 and 11 are made up in exactly the same manner. Fig. 3 also shows the construction of seat 12, which, incidentally, has no back. The seating arrangement is shown on the design sheet, but note particularly that the four small seats No. 11 are all on one side of the lower floor. Having completed the interior and added any refinements which you may think necessary, you can now glue the remaining side finally in place.

The stairs are constructed as two separate units, and consist of one of each of A, B, C, D, E, F, G, H, and I, glued together, as shown in Fig. 4A. Each unit is glued to the lower floor in the positions indicated by the dotted lines. Note that the parts of the stairs which are seen, must be painted before gluing in place. Next glue together and shape pieces 16, as shown in Fig. 4B. The handle (No. 17) is bent from wire and inserted in the position shown, after first drilling a hole. Paint and glue to the lower floor where indicated.

Fig. 4C shows piece 18 which will be shaped from 1/8 in. by 1/8 in. stripwood, and the handle (19) and wheel (20) added afterwards. Paint and glue in position on the lower floor No. 3. Insert the wire uprights Nos. 21 and 22. The positions of the holes are shown clearly on pieces 3, 4, and 5.

#### Completing the Cars

The pieces of card No. 23 are bent round each end of piece 3, and glued. They will overlap slightly on piece 1, and must be glued here also (see B and C Fig. 5).

Pieces 24 and 25 are now glued together, as shown in Fig. 4D, and transparent material is cut to fit, and slipped in place. It is held there with small blobs of transparent glue, such as Balsa cement.

Now glue this completed window framing to the underside of piece 5, and to the front of piece 23, as shown in Fig. 5D. The sketches A, B, C and D in Fig. 5 show clearly the various steps in completing the cab.

#### The Top Deck

Bend piece 26 round the front of piece 2, and glue in place. This operation is rather tricky, and you will need to place one end in position first. Place on it a suitable weight, allow the glue to dry, and then complete the gluing and weight the other side. Cut a piece of transparent material 1 1/2 ins. by 4 ins. and bend into place behind the window opening. A drop of glue will keep it perfectly in position.

The roof is made up of pieces 27 and 28,

which are glued firmly together, the edges of piece 28 being rounded after gluing. Notice that the slots in piece 27 allow the completed roof to drop nicely

sketch. Small tape hinges are attached to pieces 43 which are hinged to the underside of piece 4. This allows the step to be up or down. It is shown up, in the finished sketch, but on the other side it will be down, to allow passengers to alight. Pieces 44 will be glued in place by means of small card strips (see Fig. 8) and they will be positioned on the opposite side to the step (43). The longer guards (42) will be glued similarly in place across the underside of piece 4.

#### Wheels and Undercarriage

The first step in making the undercarriage is to complete the turntable consisting of 48 and 49, which is shown in Fig. 9. The bogies are made up of two pieces each of 52 and 53. Each wheel is made up of one piece each 50 and 51. The axles are pieces of 1/8 in. round rod 2 1/2 ins. long, four of which are required.

Fig. 9 shows quite clearly how the various pieces

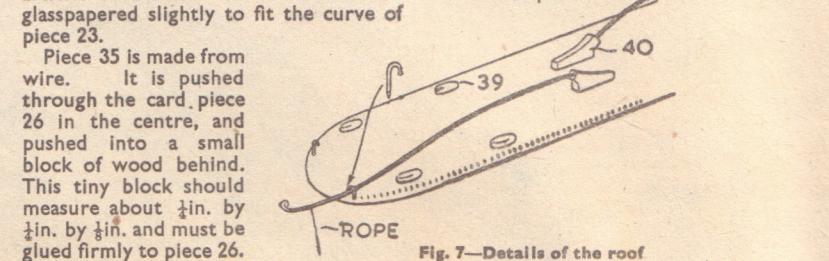


Fig. 6—Fitting the roof

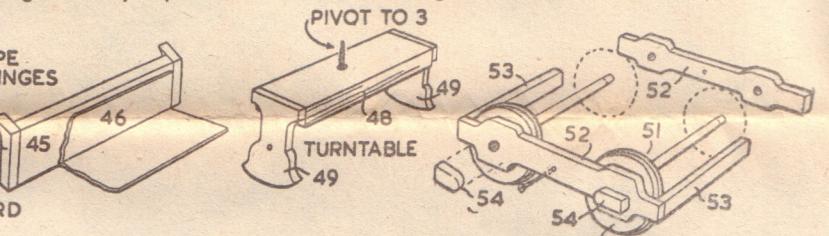


Fig. 7—Details of the roof

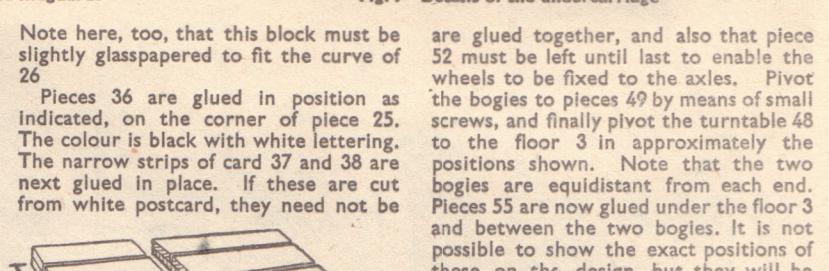


Fig. 8—The lifeguards

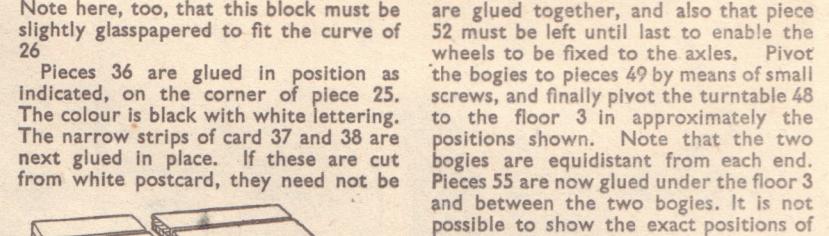


Fig. 9—Details of the undercarriage

Note here, too, that this block must be slightly glasspapered to fit the curve of 26.

Pieces 36 are glued in position as indicated, on the corner of piece 25. The colour is black with white lettering. The narrow strips of card 37 and 38 are next glued in place. If these are cut from white postcard, they need not be

glued together, and also that piece 52 must be left until last to enable the wheels to be fixed to the axles. Pivot the bogies to pieces 49 by means of small screws, and finally pivot the turntable 48 to the floor 3 in approximately the positions shown. Note that the two bogies are equidistant from each end. Pieces 55 are now glued under the floor 3 and between the two bogies. It is not possible to show the exact positions of these on the design, but they will be seen on the sketch of the finished model.

The base is made up from four pieces of 1/8 in. wood, cut to the size shown in Fig. 10. The overall width of the base is 3 1/2 ins., so that the three strips along the top must be cut to allow the wheels to run in the groove, as also shown in Fig. 10. Here we have given no measurements, so that the worker must measure the exact track of his model, and cut the narrow strips of board accordingly.

The experimental model which has been completed at our Works, was finished in red and cream, but the worker need not adhere to these colours. We suggest you paint your model in the colouring of your own local transport. In any case, the lifeguards are made of wood, and should be coloured light brown. The undercarriage also will be made of metal, and should be painted dark grey. Remember, too, to colour the seats, so as to blend with the outside colouring.

Fig. 5—Assembly of cab fittings